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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,966

04/20/2007

Katsuichi Yagisawa

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EXAMINER

DUNWOODY, AARON M

ART UNIT

PAPER NUMBER

3679

NOTIFICATION DATE

DELIVERY MODE

03/26/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/583,966	Applicant(s) YAGISAWA ET AL.	
	Examiner Aaron M. Dunwoody	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7-10 and 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-10 and 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/25/2010 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, 7, 8, 12, 13, and 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 4997216, Washizu.

In regards to claim 1, in Figures 1 and 3, Washizu discloses a resin tube-equipped quick connector for connecting a fuel-transporting resin tube to a mating pipe, comprising a connector body (1), a C-shaped retainer (2) and a seal member (6,6');

wherein the connector body has a generally tubular shape as a whole, has a retainer holding portion adapted to receive and hold the C-shaped retainer in an axial opening at one axial end thereof, and also has at an opposite axial end thereof, a press-fitting portion which is press-fitted into the interior of the resin tube from one end thereof,

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wherein the retainer holding portion includes first and second windows opening through opposite curved sides thereof, wherein the C-shaped retainer includes a first arc-shaped portion which projects outwardly into the first window of the retainer holding portion, and a second arc-shaped portion which projects outwardly into the second window of the retainer holding portion, wherein the C-shaped retainer is engaged with a convex or concave pipe-side engagement portion, formed on an outer peripheral surface of the mating pipe and spaced from an axial insertion-side end thereof, so as to fix the inserted mating pipe in the axial direction;

wherein the seal member is mounted within the connector body at an inner region thereof disposed closer to the press-fitting portion than the retainer holding portion is disposed, and the seal member is brought into contact with an outer peripheral surface of an insertion end portion of the inserted mating pipe disposed closer to the distal end of the mating pipe than the pipe-side engagement portion is disposed, thereby forming an air-tight seal between the insertion end portion and an inner surface of the connector body; and

the resin tube including a press-fit undergoing portion into which the press-fitting portion is press-fitted, wherein before the press-fitting portion is press-fitted into the press-fit undergoing portion, the press-fit undergoing portion is formed with an inner diameter that is substantially equal to an outer diameter of the root portions of the press-fitting portion, and after the press-fitting portion is press-fitted into the press-fit undergoing portion of the resin tube, the press-fit undergoing portion is adapted to cause portions of its inner diameter facing the root portions to become equal to the

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outer diameter of the root portions, so that and the press-fit undergoing portion is integrated with the press-fitting portion in a withdrawal- preventing condition, wherein the press-fitting portion extends by a predetermined length L between a ring- shaped end face of the connector body and an ring-shaped end face of the press-fitting portion.

Note, the mating pipe and resin tube are not considered part of the claimed invention.

In regards to claim 2, Washizu discloses the retainer is elastically deformable radially, and includes a retainer-side retaining engagement portion which is capable of being fitted to a body-side retaining engagement portion, formed at the retainer holding portion of the connector body, from a radially-inward side to be retained and fixed in the axial direction, and at least one of an inner peripheral cam surface for elastically expanding the retainer when inserting the mating pipe into the retainer and an outer peripheral cam surface for elastically reducing the diameter of the retainer when inserting the retainer into the retainer holding portion.

In regards to claim 4, as best understood, Washizu discloses a protector is fitted on the resin tube to cover an outer peripheral surface of the resin tube.

In regards to claim 5, as best understood, Washizu discloses the resin tube has a multi-layer structure an inner layer of the resin tube is more excellent in gasoline resistance than an outer layer.

In regards to claim 7, as best understood, Washizu discloses the resin tube includes an inner diameter of not larger than 5 mm.

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In regards to claim 8, Washizu discloses a resin tube-equipped quick connector for connecting a fuel- transporting resin tube to a mating pipe, comprising:

a connector body, a C-shaped retainer and a seal member;

wherein the connector body has a generally tubular shape as a whole, and has a retainer holding portion adapted to receive and hold the C-shaped retainer in an axial opening at one axial end thereof, and also has at an other side-axial end thereof, a press-fitting portion which is press-fitted into the interior of the resin tube from one end thereof; wherein the retainer holding portion includes first and second box-shaped windows opening through opposite curved sides thereof; wherein the C-shaped retainer includes a first arc-shaped portion which projects outwardly into the first box-shaped window of the retainer holding portion, and a second arc-shaped portion which projects outwardly into the second box shaped window of the retainer holding portion, wherein the C-shaped retainer is engaged with a convex or concave pipe-side engagement portion, formed on an outer peripheral surface of the mating pipe and spaced from an axial insertion-side end thereof, so as to fix the inserted mating pipe in the axial direction; the seal member is mounted within the connector body at an inner region thereof disposed closer to the press-fitting portion than the retainer holding portion is disposed, and the seal member is brought into contact with an outer peripheral surface of an insertion end portion of the inserted mating pipe disposed closer to the distal end of the mating pipe than the pipe-side engagement portion is disposed, thereby forming an air-tight seal between the insertion end portion and an inner surface of the connector body; and a press-fit undergoing portion of the resin tube into which the press-fitting

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portion is to be press-fitted; has an inner diameter that is expanded prior to press-fitting, and the press-fit undergoing portion is press-fitted in the tube diameter-expanded press-fit undergoing portion to be integrated therewith in a withdrawal-preventing condition,

wherein the press-fit undergoing portion of the resin tube has a predetermined length L extending lengthwise along the resin tube from a distal end of resin tube, and the inner diameter of the press-fit undergoing portion is expanded by a uniform amount along length L thereof, and wherein the press-fitting portion extends by a predetermined length L between a ring-shaped end face of the connector body and an ring-shaped end face of the press-fitting portion.

Note, the mating pipe and resin tube are not considered part of the claimed invention.

In regards to claim 12, Washizu discloses no portion of the press-fitting portion has an outer diameter larger than an outer diameter d5 of each of the truncated-conical-shaped annular projections.

In regards to claim 13, Washizu discloses no portion of the press-fitting portion has an outer diameter larger than an outer diameter d5 of each of the truncated-conical-shaped annular projections.

In regards to claim 16, Washizu discloses a bushing (7) mounted within the connector body at a region deeper than the retainer holding portion.

In regards to claim 17, Washizu discloses coupling structure of a quick connector and a resin tube for connecting a fuel-transporting resin tube to a mating pipe, comprising a connector body, a retainer and a seal member; wherein the connector

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body has a generally tubular shape as a whole, and has a retainer holding portion at one axial side thereof, and also has at the other side thereof a press-fitting portion which is press-fitted into the interior of the resin tube from one end thereof, wherein the retainer is a member adapted to be held in the retainer holding portion, and is engaged with a convex or concave pipe-side engagement portion, formed on an outer peripheral surface of the mating pipe and spaced from an axial insertion-side end thereof, so as to fix the inserted mating pipe in the axial direction; wherein the seal member is mounted within the connector body at an inner region thereof disposed closer to the press-fitting portion than the retainer holding portion is disposed, and the seal member is brought into contact with an outer peripheral surface of an insertion end portion of the inserted mating pipe disposed closer to the distal end of the mating pipe than the pipe-side engagement portion is disposed, thereby forming an air-tight seal between the insertion end portion and an inner surface of the connector body; and wherein the resin tube is a small-diameter tube having an inner diameter of not larger than 5 mm, a press-fit undergoing portion into which the press-fitting portion is press-fitted is beforehand expanded in tube diameter by a beforehand-heated diameter-enlarging pin prior to the press fitting, and the press-fitting portion is press-fitted into the tube diameter-expanded press-fit undergoing portion to be integrated with the press-fitting portion in a withdrawal-preventing condition.

Note, the mating pipe and resin tube are not considered part of the claimed invention.

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In regards to claim 18, Washizu discloses the retainer is elastically deformable radially, and includes a retainer-side retaining engagement portion which is capable of being fitted to a body-side retaining engagement portion, formed at the retainer holding portion of the connector body, from a radially-inward side to be retained and fixed in the axial direction, and at least one of an inner peripheral cam surface for elastically expanding the retainer when inserting the mating pipe into the retainer and an outer peripheral cam surface for elastically reducing the diameter of the retainer when inserting the retainer into the retainer holding portion.

In regards to claim 19, as best understood, Washizu discloses a protector fitted on the resin tube to cover an outer peripheral surface of the resin tube.

In regards to claim 20, as best understood, Washizu discloses the resin tube has a multi-layer structure, having at least an inner layer and an outer layer, the inner layer being more resistant to gasoline than is the outer layer.

In regards to claim 21, as best understood, Washizu discloses the resin tube comprises a polyamide resin.

In regards to claim 22, Washizu discloses the press-fitting portion comprises: annular projections formed respectively on a plurality of axially-different portions of a outer peripheral surface of the press-fitting portion, wherein an outer diameter d_6 of a root portion provided between adjacent annular projections and an inner diameter d_3 of the tube diameter-expanded press-fit undergoing portion are substantially the same, and wherein an axial length L of the press-fitting portion and an axial length L of the press-fitting undergoing portion are substantially the same.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

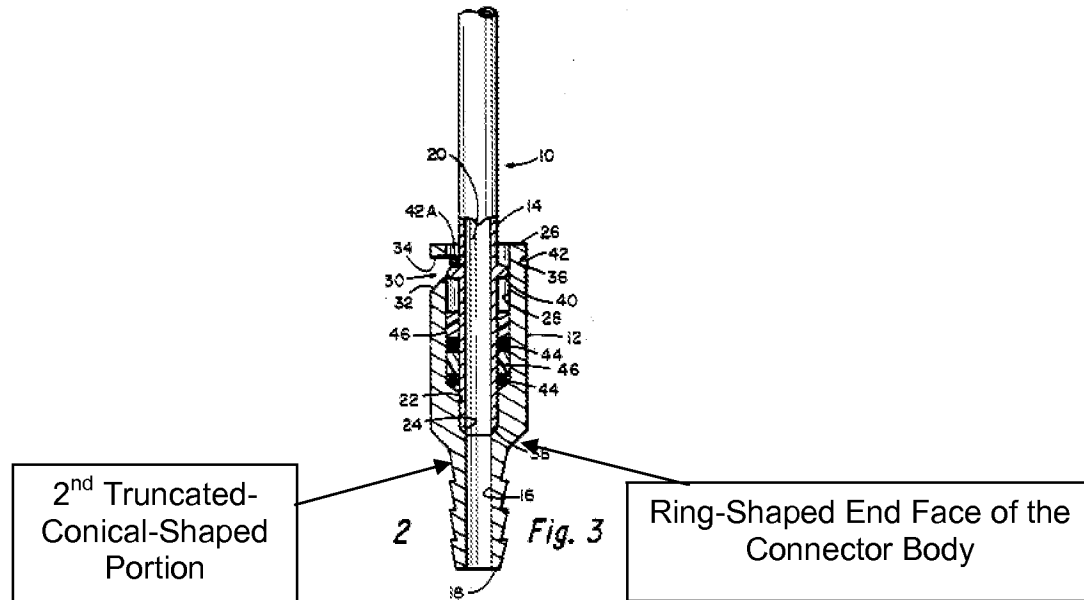
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 10, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Washizu in view of US patent 4772052, Morain.

In regards to claims 14 and 15, Washizu discloses the press-fitting portion is provided along the length L with the following portions, one immediately after another: a first truncated-conical-shaped portion extending from the ring-shaped end face; a cylindrical-shaped root portion, a plurality of truncated-conical-shaped annular projections each followed by a ring-shaped face and another cylindrical-shaped root portion. Washizu does not disclose a second truncated-conical-shaped portion, which ends abutting with the ring-shaped end face of the connector body. In Figure 3 below, Morain teaches a second truncated-conical-shaped portion, which ends abutting with the ring-shaped end face of the connector body. As Morain relates to an improved highly effective coupling which can be very expeditiously employed to connect one tubular member to another tubular member, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a second truncated-conical-shaped portion, which ends abutting with the ring-shaped end face of the connector body, since a change in the shape of a prior art device is a design

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consideration within the level of skill of one skilled in the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).



In regards to claim 9, Washizu discloses the plurality of annular projections comprises first and second annular projections disposed adjacently to each other, and the first annular projection is closer to a distal end of the press-fitting portion than the second annular projection.

In regards to claim 10, Washizu discloses the plurality of annular projections comprises first and second annular projections disposed adjacently to each other, and among the plurality of the annular projections, the first annular projection is closest to a distal end of the press-fitting portion.

Response to Arguments

Applicant's arguments with respect to claims above have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M. Dunwoody whose telephone number is 571-272-7080. The examiner can normally be reached on 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron M Dunwoody/
Primary Examiner, Art Unit 3679

.amd